



ADMINISTRATIVE  
RECORD

# WORK PLAN ADDENDUM

## BNSF RAILYARD LIBBY, MONTANA SEPTEMBER 2005 EMR PROJECT 5539

*Prepared for:*

**BNSF Railway Company**  
139 North Last Chance Gulch Street  
Helena, Montana 59601

*Prepared by:*

**EMR, INC.**  
5301 East River Road, Suite 114  
Fridley, Minnesota 55421

**SEPTEMBER 2005**



**ENVIRONMENTAL MANAGEMENT RESOURCES**

## 1.0 INTRODUCTION

EMR, Inc. (EMR) has prepared this Addendum to the Final Remedial Action Work Plan, BNSF Libby Railyard Hydrated Biotite Removal, Libby, Montana (Work Plan) for BNSF Railway Company (BNSF) in order to remove Libby Amphibole (tremolite/actinolite series) asbestos from the surface at two Libby Amphibole-impacted zones in the BNSF railyard in Libby, Montana, herein referred to as the Site. The Project Specification prepared by Kennedy/Jenks Consultants and EMR in July 2004, the Health and Safety Plan, and the Work Plan should be referenced for information and requirements specific to this Addendum.

All excavation work in this Addendum is to be completed by the end of 2005, weather permitting. Construction of replacement spur tracks may be conducted thereafter.

The Site location is shown on Figure 1. Grid 9, west of the overpass, is depicted on Figure 2. Grid 20, east of the overpass, is depicted on Figure 3. Grid 9 can be cross-referenced to Soil Sample Location Map Sheet 3, drawing number C-4S from the "Libby Railyard Response Action 2004, Revised Construction Completion Report" (Completion Report) completed in March 2005 by Kennedy/Jenks Consultants and EMR, Inc. The south half of Grid 9 requiring excavation is located south of the main line, south of soil clearance samples BR-44002 and BR-44003. Grid 20 can be cross-referenced to Soil Sample Location Map Sheet 5, drawing number C-6S from the Completion Report. The southeast quadrant of Grid 20 requiring excavation is located south of the main line, south of soil clearance sample BR-05002.

## 1.1 BACKGROUND

Following completion of the field work, it was discovered that two grids had previously been tested and found to contain trace levels of the Libby Amphibole tremolite/actinolite; these areas were inadvertently omitted from the 2004 Work Plan. The two Libby Amphibole-impacted zones are located on the south side of the main line tracks and require decontamination facilities and access from the south, to avoid crossing the mainline.

Upon realizing the omission, this information was brought to the USEPA. The discussion of these two impact areas was included in the EMR November 12, 2004 Weekly Progress Report dated December 1, 2004 to Jim Christiansen of EPA; a copy of this correspondence was included in the Completion Report.

The southern half of Grid 9, corresponding to soil sample composite BN-09000 contained less than one percent (<1%) tremolite/actinolite as indicated on Table 1. The discrete samples for this composite analyzed in December of 2001 indicated that the southeast (sample BN-09003) and southwest (sample BN-09004) corners of the grid to contain detectable tremolite/actinolite. One discrete sample from Grid 20, corresponding to soil sample composite BN-20000 contained <1% tremolite/actinolite. The discrete samples for this composite analyzed in December of 2001 indicated that the southeast (sample BN-20004) corner of the grid had detectable tremolite/actinolite.

The spur tracks under the grids will be reconstructed.

## **1.2 DIVISION OF WORK**

Project construction is divided into three phases:

- Phase 1 – Rail and tie removal and washing.
- Phase 2 – Soil excavation/removal/clean subballast backfill, compaction and re-grading for surface soils containing Libby Amphibole.
- Phase 3 – Track reconstruction.

## **1.3 STAKING**

The soil excavation areas fall within two 100' x 100' grids (Grid 9 and Grid 20) that were established in 2001. These grids correspond to composite soil samples BN-09000 and BN-20000. The soil removal area for Grid 9 will consist of an approximate 50' x 100' block and defines the south half of the grid and included discrete soil samples BN-09003 and BN-09004 (See Figure 2). The soil removal area for grid 20 will consist of an approximate 50' x 50' block and defines the southeast quadrant of the grid or the area defined by discrete soil sample BN-20004 (See Figure 3). Figures 2 and 3 depict the limits of excavation as they are understood at the time of the creation of this Addendum.

## **2.0 SITE CONSTRUCTION**

Construction oversight for Phases 1 and 2 will be conducted by EMR on behalf of BNSF. Contractors will be asked to bid on and complete both Phase 1 and 2 work. EMR will provide asbestos oversight: conduct air monitoring, visual inspection, confirmation soil sampling, and monitor for visible dust or particle emissions. EMR will complete the Daily Soil Removal Report and Daily Safety Report. GPS readings and the grid established in October 2001 will be used to determine the location of soil removal, and this information will be recorded on the Daily Soil Removal Report.

BNSF or a separate contractor will perform Phase 3 track reconstruction using its standard supervision and safety procedures for railroad construction. No special health and safety precautions will be required during track reconstruction because soils containing Libby Amphibole will have been removed.

### **2.1 PHASE 1 and 2: RAIL REMOVAL, EXCAVATION, AND DISPOSAL**

#### **2.1.1 Mobilization, Setup, Demobilization**

These activities will be conducted as described in the Work Plan with the following additions and changes.

The vehicle decontamination area will be within the CRZ as described in the Work Plan. The location of the decontamination pad will be located on the south side of the main line tracks to avoid truck and equipment crossing the main line tracks; however exact location will be determined in the field with BNSF, EPA, and contractor input. No truck scale will be required for this phase.

All work will be conducted in accordance with the Site Health and Safety Plan (HASP). The HASP will be updated to reflect current site contacts; however no other changes will be made to the 2004 HASP without approval of the USEPA.

Utility location and asbestos notification will be conducted by the Phase 1 and 2 contractor as documented in the Work Plan.

#### **2.1.2 Scope of Track Removal**

Rails from the spur tracks traversing grids 9 and 20 will be removed from areas depicted in Figures 2 and 3. Removal will include rails, tie plates, spikes, joint bars, bolts, and all other metallic appurtenances. Panels of ties and rail may be pulled in tact if possible for reuse. Additional soil samples may be collected in the vicinity of Grid 20, to evaluate whether the frog junction in the grid requires removal or possible hand digging.

Rail and ties will be pressure washed in the immediate vicinity of the point of removal. Railroad tie coring samples collected in 2004 following decontamination did not indicate detectable concentrations of Libby Amphibole.

Dust suppression procedures are outlined in Section 2.2 of Volume III, Libby Amphibole Health and Safety Plan (HASP)

### **2.1.3 Scope of Excavation and Backfill**

Site soil will be excavated and imported fill will be placed as shown on Figures 2 and 3. Soil within the south half of Grid 9 and southeast quadrant of Grid 20 will be excavated to remove detectable Libby Amphibole.

Soil will be excavated using a backhoe/trackhoe with a straight edged bucket. Conventional construction equipment can be used for loading and spreading. Soil containing Libby Amphibole will be excavated and placed in lined dump trucks for transport to the Lincoln County Landfill. Excavation and truck procedures will be conducted in accordance with EMR's Volume II, Project Specification, BNSF Libby Railyard Hydrated Biotite Removal, Libby, Montana, dated July 2004. Care must be taken to ensure that clean areas do not become contaminated again as a result of site activities. Clean areas shall be marked with paint, lathe, or other means to ensure that site workers are aware of which areas have already been cleaned to depth or capped. All work will proceed from clean to dirty areas.

The depth of excavation is anticipated to range from approximately 2 inches to 6 inches below ground surface. The practical vertical limit of excavation will most likely be a tan clay layer that is believed to represent native soil. It reportedly occurs at a depth ranging from 8 inches below ground surface near the eastern end of the railyard to 18 inches at the western limit of the probable excavation. Following excavation to the anticipated depth at which soil containing Libby Amphibole has been removed, confirmation sampling will be conducted in accordance with Section 3.0 of the Work Plan.

After confirmation sampling, in areas where soil containing Libby Amphibole has been removed, some additional clean soil may be removed to allow placement of a desired thickness of railroad sub-ballast backfill material. Clean soil removed by such over-excavation will be disposed as general fill, possibly elsewhere on BNSF property or at the Lincoln County Landfill.

Soils will be loaded into tandem dump trucks, tarps will be used to cover loaded soils, and the material will be disposed of at the Lincoln County Landfill as asbestos impacted soils.

### **2.1.4 Scope of Track Reconstruction**

Track spurs will be reconstructed at the approximate locations shown in Figures 2 and 3. BNSF will use materials suitable for future use of those tracks according to the Railroad's operational and engineering needs. BNSF forces will use the track and ties that were removed and washed for rebuilding these two sections of track.

## **2.2 FINAL SITE RESTORATION**

The Phase 1 and 2 contractor will restore grade outside of the track footprint to the grade present prior to excavation. In the track footprint the sub ballast will be placed and compacted. BNSF will accomplish final site restoration, which will consist of placement of fresh railroad ballast material over the track areas and grading as necessary.

## **2.3 SCHEDULE**

The currently anticipated project schedule is as follows:

- September 2005 – Pre-bid conference call

- September 21, 2005 – Bid Opening Date
- October 5, 2005 - Rail removal, tie removal, soil excavation, soil clearance sampling in Grid 9 and Grid 20 zones.
- BNSF reconstructs designated track spurs as weather and operational needs allow.

Dates in the schedule above are proposed, field work will be put to bid following approval of this Addendum by the USEPA

Actual field dates will be scheduled with input from the USEPA. As of the time that this Work Plan Addendum was being prepared, it is understood that the cell at the Lincoln County Landfill will be operational every other Monday through the first part of August and then may change to be every Monday thereafter. To the extent possible, this field work will be scheduled to coincide with the scheduled operation dates at the landfill. As a result, the proposed schedule above may vary dependant upon that landfill operation schedule once this Addendum is approved.

## **2.4 REPORTING AND COORDINATING ACTIVITIES**

Progress reports will be submitted to the USEPA as per the Work Plan.

### **3.0 SAMPLING AND ANALYSIS PLAN**

Air and soil sampling and analysis procedures will follow those set forth in the Work Plan with the following additions or changes.

As depicted on Figures 2 and 3, Libby Amphibole is present in Grid 9 and Grid 20. Following the removal action, a five point composite sample will be collected from the excavated portion of each grid and submitted to EMSL Laboratories for analysis. Soil samples will be collected, documented, and analyzed in accordance with procedures set forth in the Work Plan.

Discrete samples will be submitted to the laboratory and held pending results of the composite samples. Discrete samples may be analyzed if the corresponding composite sample is positive for asbestos (Libby Amphibole detected).

Should any detectable Libby Amphibole (tremolite/actinolite series) by the PLM method 9002, Issue 2 (Appendix C), be observed in the samples, an additional 6-inch lift of soil will be removed in the vicinity of the sample with detectable Libby Amphibole, and a new soil clearance sample will be collected in the same location. Initial soil clearance samples will be labeled with the "BR" prefix. If over excavation soil samples are required, these samples will be labeled with the "BX" prefix. If the excavation is at a depth of 24 inches bgs and sample results continue to indicate the presence of Libby Amphibole, BNSF or its representative will engage the USEPA in discussions to determine the appropriate course of action. Soils at deeper depths may remain in place if that is the decision of the BNSF and the USEPA.

## Figures





# LEGEND:

----- FENCE

===== RAILROAD TRACKS WITH ASSIGNED NUMBER

===== M ===== MAIN LINE RAILROAD TRACKS  
(3-4" DIAMETER QUARTZITE  
BALLAST AT LEAST 1-FOOT DEEP

===== PARKED TRAIN AT TIME  
OF INSPECTION

VISIBLE BIOTITE MARKED WITH RED  
SURVEYOR'S WHISKER

NW NE  
C  
17  
SW SE

SAMPLING GRID (100'x100')  
WITH GRID NUMBER AND GEOGRAPHIC  
REGIONS CORRESPONDING TO SAMPLE ID'S  
(EX. 2-C, 2-NW, 2-NE, 2-SW, 2-SE)

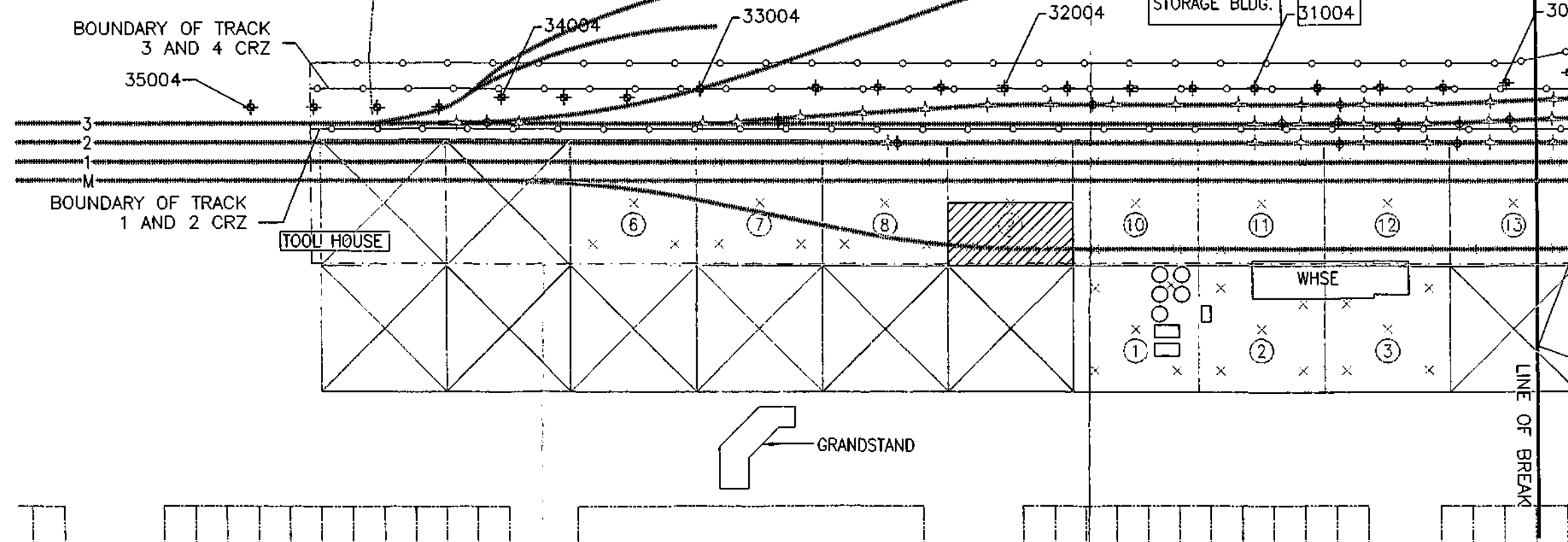
GRID LOCATION REMOVED

✦ POST VACUUM REMOVAL SOIL SAMPLE  
(50 FT INTERVAL)

✦ SITE INVESTIGATION SAMPLES

✦ DISPOSAL CRITERIA SAMPLE

2005 PROPOSED EXCAVATION AREA



2005 REMEDIAL  
ACTION MAP  
WEST SIDE  
BNSF RAIL YARD  
LIBBY, MT.

0 100  
APPROXIMATE SCALE IN FEET

BNSF RAILWAY STATION MAP  
LIBBY, MT.

Drawn by : SES  
Checked By : G.M.C.  
Project No. : 5539  
File Name : 2005RemedialActionMap  
Revision No. : 4  
Date : 9/16/2005  
Scale : 1"=100'-0"

FIGURE  
2

## Table

**Table 1**  
**Laboratory Data Summary**  
**BNSF Rail Yard**  
**Libby, Montana**  
**EMR Project 5539**

Sample ID	Scenario	Property Group (Location)	Sample Group	Location Description (Sub Location)	Media Type	Matrix	Category	Date	PLM		Grid Reference
									Method	Tremolite- Actinolite (%)	
BN-01000	N/A	BNSF Libby Railyard	Property		Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-1 Comp
BN-02000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-2 Comp
BN-03000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-3 Comp
BN-04000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-4 Comp
BN-05000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-5 Copm
BN-06000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-6 Comp
BN-07000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-7 Comp
BN-08000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-8 Comp
BN-09000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	< 1	Grid-9 Comp
BN-09001	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-9 Center
BN-09002	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	< 1	Grid-9 NW
BN-09003	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	< 1	Grid-9 SE
BN-09004	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	< 1	Grid-9 SW
BN-09005	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	< 1	Grid-9 NE
BN-10000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-10 Comp
BN-11000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-11 Comp
BN-12000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-12 Comp
BN-13000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-13 Comp
BN-14000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-14 Comp
BN-15000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-15 Comp
BN-16000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	10/31/2001	PLM-9002	ND	Grid-16 Comp
BN-17000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-17 Comp
BN-18000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-18 Comp
BN-19000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	< 1	Grid-19 Comp
BN-19001	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-19 Center
BN-19002	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-19 NW
BN-19003	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	< 1	Grid-19 NE
BN-19004	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-19 SE
BN-19005	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-19 SW

**Table 1**  
**Laboratory Data Summary**  
**BNSF Rail Yard**  
**Libby, Montana**  
**EMR Project 5539**

Sample ID	Scenario	Property Group (Location)	Sample Group	Location Description (Sub Location)	Media Type	Matrix	Category	Date	PLM		Grid Reference
									Method	Tremolite- Actinolite (%)	
BN-20000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	< 1	Grid-20 Comp
BN-20001	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-20 Center
BN-20002	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-20 NW
BN-20003	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-20 NE
BN-20004	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	< 1	Grid-20 SE
BN-20005	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-20 SW
BN-21000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-21 Comp
BN-22000	N/A	BNSF Libby Railyard	Property	NA	Soil-Like	Surface soil	Field Sample	11/1/2001	PLM-9002	ND	Grid-22 Comp

NA = Not Available

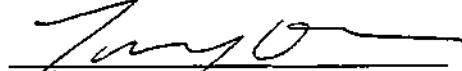
ND = Not Detected above method detection limit

#### 4.0 Work Plan Approval

EMR, Inc., as environmental consultants, respectfully submits this Work Plan Addendum to the United States Environmental Protection Agency on behalf of the BNSF Railway Company.

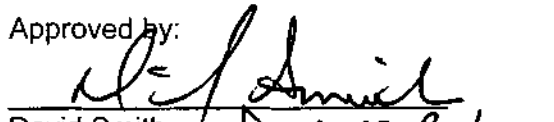
The preceding report was prepared and reviewed by the following personnel.

Author:


  
Tanya Drake  
Project Coordinator  
EMR, Inc.

9/23/05  
Date

Approved by:

  
David Smith *for BNSF Railway*  
Manager Environmental Remediation  
BNSF Railway Company

09/16/05  
Date

  
Jim Christiansen  
On Scene Coordinator  
Environmental Protection Agency

9/25/05  
Date